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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/005,435	12/03/2001	Shunpei Yamazaki	SEL 132 DIV 1	1752

26568 7590 10/03/2003

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EXAMINER	
QI, ZHI QIANG	
ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)	
	10/005,435	YAMAZAKI ET AL.	
	Examiner	Art Unit	
	Mike Qi	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 July 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *36-83* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *36-83* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. *09/329,597* .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 36,37,40 and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,805,252 (Shimada et al).

Claim 36, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that manufacturing a liquid crystal display device comprising:

- forming a thin film transistor (TFT 40) over a substrate (31);
- forming a reflection electrode (38) (functions as a pixel electrode) electrically connected to the thin film transistor (TFT 40);
- forming the reflection electrode (38) having bumps portions, that means the reflection electrode (38) having such textured surface, so that a body with a textured surface on the reflection pixel electrode (38), and the bumps is formed by using photolithography;
- forming an oxidized layer (38a) (such as aluminum oxide, e.g., Al_2O_3 as a light reflection film) on the surface of the reflection electrode (38) with the textured surface, so that a light reflection film on the body with the textured surface.

Therefore, Shimada meets the limitations as claimed.

Claim 37, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that the

reflection electrode (38) functions as a pixel electrode made of aluminum (Al).

Claim 40, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that the oxidized layer (38a) functions as the light reflection film made of aluminum oxide (Al_2O_3).

Claim 41, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that the display device is a reflection type liquid crystal display device.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 38,39,42 and 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada as applied to claims 36,37,40 and 41 above.

Claim 38, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14; col.12, lines 5-20; Fig.16) that the textured surface body also can be formed of oxide film such as silicon oxide (SiO_2). Shimada also discloses the bumps (42a) using organic insulating film. Shimada also discloses (col.5, lines 11-14) that a reflector is formed on a rugged SiO_2 layer, and that is disclosed in US. Patent 4,431,272, and that would have been at least obvious.

Claim 39, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14; col.2, lines 36-58) that the bumps (42a) has a certain height less than 10 μm, and it is common and

known as the height of the roughened surface much less the liquid crystal device would be much thinner and controlling the height well in order to realize an optimum reflection property such as the height is approximately 0.01μm (less than 1 μm), so that controlling the unevenness would have been at least obvious for achieving an optimum reflection property.

Claim 42, the limitations are only given weight as intended use. Any display can be used for these products, and that would have been at least obvious.

Claim 78, Shimada discloses (col.3, lines 3-46) that a metallic thin film (also an alloy film) being formed by vacuum evaporation or sputtering technique, and that is conventional.

5. Claims 43-49 and 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,805,252 (Shimada et al) in view of US 6,154,264 (Koide et al) and US 6,163,055 (Hirakata et al).

Claim 43, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that manufacturing a liquid crystal display device comprising:

- forming a thin film transistor (TFT 40) over a substrate (31);
- forming a reflection electrode (38) (functions as a pixel electrode) electrically connected to the thin film transistor (TFT 40);
- forming the reflection electrode (38) having bumps portions, that means the reflection electrode (38) having such textured surface, so that a body with a textured surface on the reflection pixel electrode (38), and the bumps is formed by using photolithography;

- forming an oxidized layer (38a) (such as aluminum oxide, e.g., Al_2O_3 as a light reflection film) on the surface of the reflection electrode (38) with the textured surface, so that a light reflection film on the body with the textured surface.

Shimada does not expressly disclose flattening a surface of the light reflection film by CMP process.

However, Koide discloses (col.11, lines 3-54: Fig.4) that using flat top reflective plate (5) formed over the pixel electrode (11), and the reflective plate made of aluminum-base alloy for achieving high reflectivity. Hirakata discloses (col.7, lines 47-54) that using CMP process (chemical mechanical polishing) would obtain a superior flat surface for the thin film.

Since using flat reflection film would obtain high reflectivity and using CMP process would obtain superior flat surface.

Therefore, it would have been obvious to those skilled in the art at the time the invention was made to flattening a surface of the reflection film by CMP process as claimed in claim 43 for achieving high reflectance and superior flat surface.

Claim 44, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that the reflection electrode (38) functions as a pixel electrode made of aluminum (Al).

Claim 47, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that the oxidized layer (38a) functions as the light reflection film made of aluminum oxide (Al_2O_3).

Claim 48, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that the display device is a reflection type liquid crystal display device.

Claim 45, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14; col.12, lines 5-20; Fig.16) that the textured surface body also can be formed of oxide film such as silicon oxide (SiO_2). Shimada also discloses the bumps (42a) using organic insulating film. Shimada also discloses (col.5, lines 11-14) that a reflector is formed on a rugged SiO_2 layer, and that is disclosed in US. Patent 4,431,272, and that would have been at least obvious.

Claim 46, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14; col.2, lines 36-58) that the bumps (42a) has a certain height less than 10 μm, and it is common and known as the height of the roughened surface much less the liquid crystal device would be much thinner and controlling the height well in order to realize an optimum reflection property such as the height is approximately 0.01μm (less than 1 μm), so that controlling the unevenness would have been at least obvious for achieving an optimum reflection property.

Claim 49, the limitations are only given weight as intended use. Any display can be used for these products, and that would have been at least obvious.

Claim 79, Shimada discloses (col.3, lines 3-46) that a metallic thin film (also an alloy film) being formed by vacuum evaporation or sputtering technique, and that is conventional.

6. Claims 50-56 and 80 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,805,252 (Shimada et al) in view of US 5,453,859 (Sannohe et al).

Claim 50, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that

manufacturing a liquid crystal display device comprising:

- forming a thin film transistor (TFT 40) over a substrate (31);
- forming a reflection electrode (38) (functions as a pixel electrode) electrically connected to the thin film transistor (TFT 40);
- forming the reflection electrode (38) having bumps portions, that means the reflection electrode (38) having such textured surface, so that a body with a textured surface on the reflection pixel electrode (38), and the bumps is formed by using photolithography;
- forming an oxidized layer (38a) (such as aluminum oxide, e.g., Al_2O_3 as a light reflection film) on the surface of the reflection electrode (38) with the textured surface, so that a light reflection film on the body with the textured surface.

Shimada does not expressly disclose that the light reflection film has a higher refractive index than the body with the textured surface.

However, the certain material have a certain refractive index and that is common and known in the art. The light reflection film made of aluminum oxide and the body with the textured surface made of silicon oxide. So that the material would show the refractive index of the light reflective film is higher than the refractive index of the body with the textured surface.

Sannohe discloses (table 1 in col.6) that of the silicon oxide (the body with the textured surface) is 1.46, and the refractive index of the aluminum oxide (the light reflection film) is 1.62, and that would have been at least obvious.

Therefore, it would have been obvious at the time the invention was made to use

the light reflection film has a higher refractive index than the body with the textured surface as claimed because the material determines the refractive index.

Claim 51, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that the reflection electrode (38) functions as a pixel electrode made of aluminum (Al).

Claim 54, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that the oxidized layer (38a) functions as the light reflection film made of aluminum oxide (Al_2O_3).

Claim 55, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that the display device is a reflection type liquid crystal display device.

Claim 52, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14; col.12, lines 5-20; Fig.16) that the textured surface body also can be formed of oxide film such as silicon oxide (SiO_2). Shimada also discloses the bumps (42a) using organic insulating film. Shimada also discloses (col.5, lines 11-14) that a reflector is formed on a rugged SiO_2 layer, and that is disclosed in US. Patent 4,431,272, and that would have been at least obvious.

Claim 53, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14; col.2, lines 36-58) that the bumps (42a) has a certain height less than 10 μm, and it is common and known as the height of the roughened surface much less the liquid crystal device would be much thinner and controlling the height well in order to realize an optimum reflection property such as the height is approximately 0.01μm (less than 1 μm), so that controlling the unevenness would have been at least obvious for achieving an optimum reflection property.

Claim 56, the limitations are only given weight as intended use. Any display can be used for these products, and that would have been at least obvious.

Claim 80, Shimada discloses (col.3, lines 3-46) that a metallic thin film (also an alloy film) being formed by vacuum evaporation or sputtering technique, and that is conventional.

7. Claims 57-63 and 81are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,805,252 (Shimada et al) in view of US 6,163,055 (Hirakata et al).

Claim 57, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that manufacturing a liquid crystal display device comprising:

- forming a thin film transistor (TFT 40) over a substrate (31);
- forming a reflection electrode (38) (functions as a pixel electrode) electrically connected to the thin film transistor (TFT 40);
- forming the reflection electrode (38) having bumps portions, that means the reflection electrode (38) having such textured surface, so that a body with a textured surface on the reflection pixel electrode (38), and the bumps is formed by using photolithography;
- forming an oxidized layer (38a) (such as aluminum oxide, e.g., Al_2O_3 as a light reflection film) on the surface of the reflection electrode (38) with the textured surface, so that a light reflection film on the body with the textured surface.

Shimada discloses a liquid crystal display device using thin film transistors (TFT)

as the switching elements. Shimada does not expressly disclose using insulated gate field effect transistor (IGFET) on a semiconductor substrate.

However, it was common and known in the art using TFT and using IGFET have the equivalent characteristics. Hirakata discloses (col.11, line 63 – col.12, line 35; Fig.9) that using IGFET as semiconductor element formed on a semiconductor substrate (901), and having the same effect being applied to reflection type LCD, and that have been at least obvious.

Therefore, it would have been obvious to those skilled in the art at the time the invention was made to use IGFET as claimed in claim 57 and that is dependent on the different applications and would have equivalent characteristics as using TFT.

Claim 58, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that the reflection electrode (38) functions as a pixel electrode made of aluminum (Al).

Claim 61, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that the oxidized layer (38a) functions as the light reflection film made of aluminum oxide (Al_2O_3).

Claim 62, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that the display device is a reflection type liquid crystal display device.

Claim 59, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14; col.12, lines 5-20; Fig.16) that the textured surface body also can be formed of oxide film such as silicon oxide (SiO_2). Shimada also discloses the bumps (42a) using organic insulating film. Shimada also discloses (col.5, lines 11-14) that a reflector is formed on a rugged

SiO_2 layer, and that is disclosed in US. Patent 4,431,272, and that would have been at least obvious.

Claim 60, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14; col.2, lines 36-58) that the bumps (42a) has a certain height less than 10 μm, and it is common and known as the height of the roughened surface much less the liquid crystal device would be much thinner and controlling the height well in order to realize an optimum reflection property such as the height is approximately 0.01μm (less than 1 μm), so that controlling the unevenness would have been at least obvious for achieving an optimum reflection property.

Claim 63, the limitations are only given weight as intended use. Any display can be used for these products, and that would have been at least obvious.

Claim 81, Shimada discloses (col.3, lines 3-46) that a metallic thin film (also an alloy film) being formed by vacuum evaporation or sputtering technique, and that is conventional

8. Claims 64-70 and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,805,252 (Shimada et al) in view of US 6,163,055 (Hirakata et al) and US 6,154,264 (Koide et al).

Claim 64, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that manufacturing a liquid crystal display device comprising:

- forming a thin film transistor (TFT 40) over a substrate (31);
- forming a reflection electrode (38) (functions as a pixel electrode) electrically connected to the thin film transistor (TFT 40);

- forming the reflection electrode (38) having bumps portions, that means the reflection electrode (38) having such textured surface, so that a body with a textured surface on the reflection pixel electrode (38), and the bumps is formed by using photolithography;
- forming an oxidized layer (38a) (such as aluminum oxide, e.g., Al_2O_3 as a light reflection film) on the surface of the reflection electrode (38) with the textured surface, so that a light reflection film on the body with the textured surface.

Shimada discloses a liquid crystal display device using thin film transistors (TFT) as the switching elements. Shimada does not expressly disclose using insulated gate field effect transistor (IGFET) on a semiconductor substrate, and flattening a surface of the light reflection film by CMP process.

However, it was common and known in the art using TFT and using IGFET have the equivalent characteristics. Hirakata discloses (col.11, line 63 – col.12, line 35; Fig.9) that using IGFET as semiconductor element formed on a semiconductor substrate (901), and having the same effect being applied to reflection type LCD, and that have been at least obvious.

Further, Koide discloses (col.11, lines 3-54: Fig.4) that using flat top reflective plate (5) formed over the pixel electrode (11), and the reflective plate made of aluminum-base alloy for achieving high reflectivity. Hirakata discloses (col.7, lines 47-54) that using CMP process (chemical mechanical polishing) would obtain a superior flat surface for the thin film.

Since using flat reflection film would obtain high reflectivity and using CMP process would obtain superior flat surface.

Therefore, it would have been obvious to those skilled in the art at the time the invention was made to flattening a surface of the reflection film by CMP process as claimed in claim 64 for achieving high reflectance and superior flat surface.

Claim 65, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that the reflection electrode (38) functions as a pixel electrode made of aluminum (Al).

Claim 68, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that the oxidized layer (38a) functions as the light reflection film made of aluminum oxide (Al_2O_3).

Claim 69, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that the display device is a reflection type liquid crystal display device.

Claim 66, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14; col.12, lines 5-20; Fig.16) that the textured surface body also can be formed of oxide film such as silicon oxide (SiO_2). Shimada also discloses the bumps (42a) using organic insulating film. Shimada also discloses (col.5, lines 11-14) that a reflector is formed on a rugged SiO_2 layer, and that is disclosed in US. Patent 4,431,272, and that would have been at least obvious.

Claim 67, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14; col.2, lines 36-58) that the bumps (42a) has a certain height less than 10 μm, and it is common and known as the height of the roughened surface much less the liquid crystal device would be much thinner and controlling the height well in order to realize an optimum reflection

property such as the height is approximately 0.01μm (less than 1 μm), so that controlling the unevenness would have been at least obvious for achieving an optimum reflection property.

Claim 70, the limitations are only given weight as intended use. Any display can be used for these products, and that would have been at least obvious.

Claim 82, Shimada discloses (col.3, lines 3-46) that a metallic thin film (also an alloy film) being formed by vacuum evaporation or sputtering technique, and that is conventional

9. Claims 71-77 and 83 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,805,252 (Shimada et al) in view of US 6,163,055 (Hirakata et al) and US 5,453,859 (Sannohe et al).

Claim 71, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that manufacturing a liquid crystal display device comprising:

- forming a thin film transistor (TFT 40) over a substrate (31);
- forming a reflection electrode (38) (functions as a pixel electrode) electrically connected to the thin film transistor (TFT 40);
- forming the reflection electrode (38) having bumps portions, that means the reflection electrode (38) having such textured surface, so that a body with a textured surface on the reflection pixel electrode (38), and the bumps is formed by using photolithography;

- forming an oxidized layer (38a) (such as aluminum oxide, e.g., Al_2O_3 as a light reflection film) on the surface of the reflection electrode (38) with the textured surface, so that a light reflection film on the body with the textured surface.

Shimada discloses a liquid crystal display device using thin film transistors (TFT) as the switching elements. Shimada does not expressly disclose using insulated gate field effect transistor (IGFET) on a semiconductor substrate, and light reflection film has a higher refractive index than the body with the textured surface.

However, it was common and known in the art using TFT and using IGFET have the equivalent characteristics. Hirakata discloses (col.11, line 63 – col.12, line 35; Fig.9) that using IGFET as semiconductor element formed on a semiconductor substrate (901), and having the same effect being applied to reflection type LCD, and that have been at least obvious.

Further, the certain material have a certain refractive index and that is common and known in the art. The light reflection film made of aluminum oxide and the body with the textured surface made of silicon oxide. So that the material would show the refractive index of the light reflective film is higher than the refractive index of the body with the textured surface.

Sannohe discloses (table 1 in col.6) that of the silicon oxide (the body with the textured surface) is 1.46, and the refractive index of the aluminum oxide (the light reflection film) is 1.62, and that would have been at least obvious.

Therefore, it would have been obvious at the time the invention was made to use

the light reflection film has a higher refractive index than the body with the textured surface as claimed because the material determines the refractive index.

Claim 72, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that the reflection electrode (38) functions as a pixel electrode made of aluminum (Al).

Claim 75, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that the oxidized layer (38a) functions as the light reflection film made of aluminum oxide (Al_2O_3).

Claim 76, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14) that the display device is a reflection type liquid crystal display device.

Claim 73, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14; col.12, lines 5-20; Fig.16) that the textured surface body also can be formed of oxide film such as silicon oxide (SiO_2). Shimada also discloses the bumps (42a) using organic insulating film. Shimada also discloses (col.5, lines 11-14) that a reflector is formed on a rugged SiO_2 layer, and that is disclosed in US. Patent 4,431,272, and that would have been at least obvious.

Claim 74, Shimada discloses (col.9, line 1 – col.12, line 2; Fig.14; col.2, lines 36-58) that the bumps (42a) has a certain height less than 10 μm, and it is common and known as the height of the roughened surface much less the liquid crystal device would be much thinner and controlling the height well in order to realize an optimum reflection property such as the height is approximately 0.01μm (less than 1 μm), so that controlling the unevenness would have been at least obvious for achieving an optimum reflection property.

Claim 77, the limitations are only given weight as intended use. Any display can be used for these products, and that would have been at least obvious.

Claim 83, Shimada discloses (col.3, lines 3-46) that a metallic thin film (also an alloy film) being formed by vacuum evaporation or sputtering technique, and that is conventional.

Response to Arguments

10. Applicant's arguments filed on Jul.24, 2003 have been fully considered but they are not persuasive.

Applicant's **only** arguments are as follows:

1) The claims of the US 6,384,886 patent do not recite the limitation of forming a body with a textured surface on the pixel electrode by a photolithography.

2) The reference Yamanaka has a later filing date than the application that cannot be a prior art.

Examiner's responses to Applicant's **only** arguments are as follows:

1) Using photolithography to form the body that is a conventional technique and disclosed in the prior art of record such as the reference Shimada and explained above.

2) Even though the reference Yamanaka cannot be a prior art, but there are references in the art described using photolithography to form the body such as the explanation of Shimada above.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Qi whose telephone number is (703) 308-6213.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

TOAN TON
PRIMARY EXAMINER

Mike Qi
September 6, 2003